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09/775,999	02/02/2001	Paul Stiros	8412	7441

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EXAMINER

CHORBAJI, MONZER R

ART UNIT PAPER NUMBER

1744

DATE MAILED: 02/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/775,999

Applicant(s)

STIROS ET AL.

Examiner

MONZER R CHORBAJI

Art Unit

1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

This final office action is in response to the amendment received on 11/18/2003

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 1744

4. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aibe et al (U.S.P.N. 5,403,548) in view of Bermas (U.S.P.N. 5,772,959).

With respect to claims 1 and 9, Aibe et al teaches the following: an air-deodorizing device (figure 3, 31) and a method (col.20, test example 3), which includes a forced air filter member (figure 3, unlabeled entire filter structure made up of 36 and the filter medium, which is disposed in upper part of 35), a filter element (figure 3, 36) with a filter medium (col.4, lines 5-7), an air moving member (figure 3, 35) that draws air through at least a portion of the filter element (figure 3, 36, the arrows, and 38) such that the filter member is detachable from it (figure 1, 6 and col.13, lines 35-38), positioning the filter member inside a confined space (col.12, lines 67-68 and col.13, lines 1-2), and neutralizing odor in the air of the confined space. However, with respect to claims 1 and 9, Aibe et al fails to disclose the use of sodium bicarbonate. Bermas, which is in the art of deodorizing the air in refrigerators (col.1, lines 11-15) using passive deodorizers (figure 1, 10), teaches that combining activated carbon and sodium bicarbonate is known in the art of deodorizing refrigerators (col.1, lines 49-54). Thus, it would have been obvious for a person having ordinary skill in the art of deodorizing air in the refrigerators to utilize the teachings of Bermas to Aibe et al in order to maximize the rate of deodorization of air inside refrigerators by combining passive and active deodorizers.

With respect to claims 2-4, Aibe et al teaches the following: the filter member (figure 2, 7) includes a cartridge (figure 1, 6) which has a top portion and a bottom portion (figure 2, such parts of 6 are not labeled), also the cartridge has air inlets in its top (figure 2, top portion of 6 is not labeled) and air outlets on its bottom (figure 2,

Art Unit: 1744

bottom portion of 6 is not labeled), the air moving member (figure 2, the lower part of 2 which includes a fan) has a top portion (serves as a base for the filter member) with an air inlet therein (figure 2, top portion of the lower part of 2 on which 7 lies directly above), the cartridge (figure 1, 6) sits on the top portion of the air moving member such that the air outlets on the bottom of the cartridge partially in alignment with the air inlet on the air moving member, the air moving member includes a fan (figure 2, 8).

With respect to claim 5, Bermas teaches the use of sodium bicarbonate (col.1, lines 49-54) and further discloses that Frazier teaches that it is known to use deodorizers in granular form so that a fan can draw air through the filter (sufficiently pervious) to remove odors (col.2, lines 11-17). Thus, one skilled in the art would have been motivated to modify Aibe et al. apparatus to include a known deodorizer such as sodium bicarbonate in granular form such that it is sufficiently pervious for the system to operate.

With respect to claims 6-7, Bermas teaches the following: filter element (figure 2, 10) includes a container (figure 2, 40) with at least two air pervious sides (figure 4, 40 has two unlabeled sides), which contains sodium bicarbonate (col.1, line 51), the container is a bag (col.4, lines 51-52) made of air pervious material with sodium bicarbonate therein, and the filter medium includes activated carbon (col.4, line 41).

With respect to claim 8, Aibe discloses the use of activated carbon as part of the filter medium (col.4, lines 5-6).

With respect to claims 10, Aibe teaches that the confined space is inside a refrigerator (col.20, lines 22-23).

Art Unit: 1744

5. Claims 11-17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aibe et al (U.S.P.N. 5,403,548) in view of Bermas (U.S.P.N. 5,772,959) and further in view of Aibe et al (U.S.P.N. 5,288,306).

With regard to claims 11, 14, and 16, Aibe et al ('548) teaches the following: an air-deodorizing device (figure 3, 31) and a method (col.20, test example 3), which includes a forced air filter member (figure 3, unlabeled entire filter structure made up of 36 and the filter medium, which is disposed in upper part of 35), a filter element (figure 3, 36) with a filter medium (col.4, lines 5-7), an air moving member (figure 3, 35) that draws air through at least a portion of the filter element (figure 3, 36, the arrows, and 38) such that the filter member is detachable from it (figure 1, 6 and col.13, lines 35-38), positioning the filter member inside a confined space (col.12, lines 67-68 and col.13, lines 1-2), and neutralizing odor in the air of the confined space. However, with respect to claims 11 and 16, Aibe et al ('548) fails to disclose the use of sodium bicarbonate and the use of a second filter member used interchangeably with the first filter member. However, with respect to claim 11, Bermas discloses the use of sodium bicarbonate in deodorizing the inside of refrigerators (col.1, lines 49-54) but fails to teach the use of a second filter member used interchangeably with the first filter member. With respect to claims 11 and 16, Aibe et al ('306) teaches multiple filter members (figure 23, 195 and 196) that can be interchangeably used (col.8, lines 39-40 and col.11, lines 3-6) relative to the air-moving member (figure 23, 194) by being detachable. Also, Aibe et al ('306) discloses using various distinct filter mediums (figure 1, 6 and 7). Thus, it would have been obvious to one having ordinary skill in the art to modify the method and apparatus

Art Unit: 1744

of Aibe et al ('548) to include multiple filter members since utilizing a plurality of filter members having varying adsorbent affinities for malodorous components, even a gas containing many kinds of malodorous or toxic components can be efficiently eliminated (Aibe et al '306, col.8, lines 41-45).

With respect to claim 12, Aibe et al ('548) teaches that the confined space is inside a refrigerator (col.20, lines 22-23).

With respect to claims 13 and 15, Aibe discloses that the device can be used in a refrigerator (col.20, lines 22-23), which intrinsically includes compartments separate from the remainder of the confined space. Thus, in order to deodorize air in a refrigerator, inserting the device in the compartments or in the main section of the refrigerator is an intrinsic step in achieving such a goal. However, Aibe fails to disclose the use of sodium bicarbonate. Bermas teaches the use of a passive filter member (figure 1, 10), which includes sodium bicarbonate (col.1, line 51) to deodorize air in a refrigerator. As a result, it would have been obvious for a person having ordinary skill in the art of deodorizing air in the refrigerators to utilize the teachings of Bermas to Aibe in order to optimize the rate of deodorization of air inside refrigerators by combining passive and active deodorizers.

With respect to claim 17, Aibe et al ('548) teaches the following: the air moving member (figure 2, the lower part of 2 which includes a fan) has a top portion (serves as a base for the filter member) with an air inlet therein (figure 2, top portion of the lower part of 2 on which 7 lies directly above), the cartridge (figure 1, 6) sits on the top portion of the air moving member such that the air outlets on the bottom of the cartridge

Art Unit: 1744

partially in alignment with the air inlet on the air moving member, the air moving member includes a fan (figure 2, 8). Furthermore, the filter member is intrinsically held in place by the gravitational forces (suction of the fan) and the surface topology of the interfacing parts of the filter member and the air-moving member. In addition, Aibe et al ('548) teaches that the location of the fan, the cartridge, the inlets, and the outlets can be varied (col.9, lines 32-51 and col.14, lines 21-31).

With respect to claim 20, Aibe et al ('548) discloses an emitting member (figure 1, 6) including a substance (deodorized air) to be emitted into the atmosphere.

6. Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aibe et al (U.S.P.N. 5,403,548) in view of Bermas (U.S.P.N. 5,772,959) and further in view of Aibe et al (U.S.P.N. 5,288,306) and Ganz (U.S.P.N. 2,025,657).

With respect to claim 18, both Aibe et al ('548), Bermas, and Aibe et al ('306) fail to teach the concept of having complementary hemispherical interfacing parts between the filter member and the air-moving member. Ganz discloses a hemispherical filter member (figure 1, 10 and 12) for deodorizing air (col.1, lines 5-6). Thus, It would have been obvious to one having ordinary skill in the art to modify the air-moving member of Aibe et al ('548) to include a spherical filter member since such a shape has an attractive appearance (Ganz, col.1, lines 16-18).

With respect to claim 19, the filter member (36) of Aibe et al ('548) is lifted upward from the air-moving member (35) for replacement (col.13, lines 35-38).

Response to Arguments

Art Unit: 1744

7. Applicant's arguments filed 11/18/2003 have been fully considered but they are not persuasive.

On page 6 of the response, applicant argues, "Test example 3 of Aibe et al. does not describe a situation where a first filter member is positioned inside a confined space and positioning a second passive filter inside a confined space at the same time".

Claims 1 and 9 require one filter only and not two filters. With respect to example 3, whether the examiner is right or wrong in interpreting example 3, claims 1 and 9 again requires only one filter.

On page 7 of the response, applicant argues, "Thus, Bermas indicates that combinations of such materials did not work. This is a teaching away from the claimed invention". Bermas does not indicate, "did not work". He indicated that such a combination for their purposes (or in their opinion) did not provide the desired results for short term and long-term effects. In addition, the reference explicitly teaches that combining baking soda and activated carbon is known.

On page 7 of the response, applicant argues, "The Bermas reference teaches nothing about how to combine activated carbon with sodium bicarbonate in a manner that will work." The Bermas reference does not have to tell about how all the various combinations work. Finding how each combination works is a matter of routine experimentation.

On page 7 of the response, applicant argues, "There is no teaching or disclosure in the Bermas reference of the desirability of combining the teachings of the Frazer reference with a mixture of activated carbon and sodium bicarbonate in a manner that

Art Unit: 1744

will produce the desired results." Although col.2, lines 11-17 discusses the Frazer reference, it is still a discussion taught within the Bermas reference. Thus the use only of "Bermas" to denote the name of the reference, the examiner reference to col.2, lines 11-17 was not a suggestion that specifically sodium bicarbonate and activated carbon where specifically taught per se at col.2, lines 11-17 but only that it is conventional in the art to use more than one deodorizer together.

On page 7 of the response, applicant argues, "Bermas does not teach that one should do this, or that such a combination will work." Bermas teaches combining baking soda with activated carbon fresheners. Also, Bermas teaches that Frazier teaches that it is known to combine fans with filters. Such teachings are available to one skilled in the art that routine experimentation would result in using fans with baking soda and activated carbon materials. Also, for the specific use of fans, Aibe et al ('548) teaches the combination of using fans with filters.

On 8 of the response, applicant argues, "The Ganz reference is not used in combination with an air-moving member". The Ganz reference was combined with Aibe et al and Bermas references for the "hemispherical" shape of the filter only.

On page 8 of the response, applicant argues, "It would not make sense to use a spherical activated carbon honeycomb element because this compartment is not configured to accept a spherically-shaped element." It is credible to believe that changes in the design of Aibe et al fresheners to accommodate the freshener of Ganz is a matter of routine experimentation.

On page 8 of the response, applicant argues, "There is no teaching or suggestion in the Aibe et al. reference to provide a filter member is used in conjunction with an air moving member that is held in place thereon by gravitational forces and the surface topology of the interfacing parts of the filter member and the air moving member." Modifying Aibe et al apparatus to include Ganz freshener would result in a hemispherical freshener held in place by gravitational forces by having complimentary surface topology between the Aibe et al apparatus and Ganz air freshener.

On page 8 of the response, applicant argues, "there is no need to be concerned with the attractive appearance of the honeycomb element in Aibe because it is hidden from view when in use." The Aibe et al ('548) filter in figure 6 is not hidden from view and one skilled in the art would modify the design of Aibe et al ('548) apparatus to include Ganz freshener because of its attractive appearance.

On page 9 of the response, applicant states, "The activated carbon honeycomb elements are not described as being used in a confined space (for example, a refrigerator) outside of the housing of the gas treating apparatus". The Aibe et al ('306) reference is combined with Aibe et al ('548) and Bermas reference for the concept of using multiple filter members only and not for such filter members to be used in a confined space (refrigerator). Using filter members in a confined space is disclosed in Aibe et al ('548) reference.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 1744

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

9. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MONZER R CHORBAJI whose telephone number is (571) 272-1271. The examiner can normally be reached on M-F 8:30-5:00.

11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ROBERT J WARDEN can be reached on (571) 272-1281. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

12. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Monzer R. Chorbaji

Application/Control Number: 09/775,999

Page 12

Art Unit: 1744

Patent Examiner *MRC*

AU 1744

01/23/2004

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